

Decision **DRAFT DECISION OF ALJ DUDA** (Mailed 2/27/2002)**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

Joint Application of AT&T Communications of California, Inc. (U 5002 C) and WorldCom, Inc. for the Commission to Reexamine the Recurring Costs and Prices of Unbundled Switching in Its First Annual Review of Unbundled Network Element Costs Pursuant to Ordering Paragraph 11 of D.99-11-050.

Application 01-02-024  
(Filed February 21, 2001)

Application of AT&T Communications of California, Inc. (U 5002 C) and WorldCom, Inc. for the Commission to Reexamine the Recurring Costs and Prices of Unbundled Loops in Its First Annual Review of Unbundled Network Element Costs Pursuant to Ordering Paragraph 11 of D.99-11-050.

Application 01-02-035  
(Filed February 28, 2001)

Application of The Telephone Connection Local Services, LLC (U 5522 C) for the Commission to Reexamine the Recurring Costs and Prices of the DS-3 Entrance Facility Without Equipment in Its First Annual Review of Unbundled Network Element Costs Pursuant to Ordering Paragraph 11 of D.99-11-050.

Application 01-02-034  
(Filed February 28, 2001)

**INTERIM OPINION  
ESTABLISHING INTERIM RATES FOR  
PACIFIC BELL TELEPHONE COMPANY'S UNBUNDLED LOOP  
AND UNBUNDLED SWITCHING NETWORK ELEMENTS**

## Table of Contents

Title	Page
INTERIM OPINION.....	1
ESTABLISHING INTERIM RATES FOR PACIFIC BELL TELEPHONE COMPANY'S UNBUNDLED LOOP AND UNBUNDLED SWITCHING NETWORK ELEMENTS.....	1
I. Summary.....	2
II. Background.....	3
A. Applications for Annual UNE Reexamination .....	3
B. The Scoping Memo for the 2001 UNE Reexamination .....	5
C. The Issue of Competing Models.....	6
D. Motion for Interim Relief.....	8
III. Interim Rates are Warranted.....	10
IV. Pacific Should be Sanctioned for Failure to Comply with the ALJ's Discovery Rulings.....	19
V. Interim Rates for Unbundled Loops.....	24
A. Joint Applicants Proposal.....	24
B. Response.....	25
C. Discussion .....	26
1. Line Growth .....	26
2. Infill Growth vs. Plant Extension .....	29
3. DLC Equipment Costs .....	31
4. Loop Expenses .....	33
5. Changing Nominal Dollars to Real Dollars.....	36
VI. Interim Rates for Unbundled Switching.....	38
A. Joint Applicants' Proposal.....	38
B. Amended Proposal .....	41
C. Responses.....	43
D. Discussion.....	44
VII. True Up .....	52
VIII. Categorization.....	53
IX. Comments on Draft Decision.....	53
Findings of Fact.....	53
Conclusions of Law .....	57
ORDER .....	61
APPENDIX A	
APPENDIX B	
APPENDIX C	
APPENDIX D	

## I. Summary

This proceeding, known as the “UNE Reexamination,” was initiated following formal requests by carriers interconnected with Pacific Bell Telephone Company (Pacific) for the Commission to reexamine certain prices that Pacific Bell charges competitors who purchase “unbundled network elements” (UNEs). Through purchase of these UNEs, competitors are able to use portions of Pacific’s network. By this decision, we grant in part a motion for interim relief filed by AT&T Communications of California, Inc. (AT&T) and WorldCom, Inc. (WorldCom) (hereinafter referred to as “Joint Applicants”) and we set interim rates for two UNEs, namely unbundled loops and unbundled local and tandem switching. We find that interim rates are necessary due to delays in this proceeding caused by inadequacies in Pacific’s cost study filing and the need to examine competing cost models.

For unbundled loops, we adopt an interim discount of 26.8% from Pacific’s current loop price for the basic (2-wire) loop, which results in an interim loop rate of \$8.56.<sup>1</sup> Joint Applicants had requested a 36% reduction, based on a trend analysis of 1994 and 2000 loop cost data using the HAI Model version 5.2a (HAI model or HAI). After considering comments on this approach, we have made adjustments to the HAI model. Specifically, we altered Joint Applicants’ line counts to reflect physical facilities rather than “voice grade equivalents.” Also, we removed the effects of the investment/expense factor approach from the HAI trend analysis by holding loop expenses constant. We also converted the results of the trend analysis into real dollars to account for inflation over the 1994 to

---

<sup>1</sup> See Appendix A for a complete list of the adopted interim rates.

2000 time period. The analysis leading to the discount noted above is contained in Appendix B.

For unbundled switching, we adopt an interim discount of 22.5% for the port, 24.6% for usage rates, and 13.8% for tandem switching. Joint Applicants requested that we impose an interim rate based on a proposal by SBC-Ameritech for switching rates in Illinois. This request amounts to a 69% discount from current local switching rates and a 79% reduction from current tandem switching rates. We decline to adopt this approach, and instead adopt interim switching rates using the same trend analysis that we used to set an interim loop rate. The trend analysis is based on HAI model runs that were submitted with Joint Applicants' motion for interim relief. Appendix C contains the trend analysis that results in the discounts described above.

This proceeding will remain open to set final UNE rates for unbundled loops and unbundled switching. The interim rates adopted in this order are subject to adjustment, either up or down, from the effective date of this order until final rates are adopted.

Through this interim order, we also dismiss Application 01-02-034, filed by The Telephone Connection Local Services LLC, which requested review of Pacific's costs for the DS-3 entrance facility without equipment.

## **II. Background**

### **A. Applications for Annual UNE Reexamination**

In Decision (D.) 99-11-050, in the Commission's Rulemaking and Investigation to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture Development of Dominant Carrier Networks (Rulemaking (R.) 93-04-003/Investigation (I.) 93-04-002, hereinafter "OANAD proceeding"), the Commission set prices for UNEs offered by Pacific.

In this 1999 order, the Commission recognized that the Total Element Long Run Incremental (TELRIC) costs adopted by the Commission in 1998 (D.98-02-106) and used to set prices in D.99-11-050 were “based largely on data that has not been updated since 1994,” and “there is evidence that some of these costs may be changing rapidly.”<sup>2</sup>

Accordingly, the Commission established a process in D.99-11-050 that invited carriers with interconnection agreements with Pacific to annually nominate up to two UNEs for consideration of their costs by the Commission. The decision required that a party nominating a UNE for review must include a summary of evidence demonstrating a cost change of at least 20% (up or down) from the costs approved in D.98-02-106 for the UNE to be eligible for nomination.

In February 2001,<sup>3</sup> the Commission received four separate requests to nominate UNEs for cost re-examination. The four requests and the UNEs for which cost review was initially sought were as follows:

- A.01-02-024, filed jointly by AT&T and WorldCom, requesting that the Commission re-examine the recurring costs and prices of unbundled local and tandem switching.
- A.01-02-034, filed by The Telephone Connection Local Services, LLC, (Telephone Connection) requesting that the Commission re-examine the recurring costs and prices of the DS-3 entrance facility without equipment.
- A.01-02-035, filed by Joint Applicants, requesting that the Commission re-examine the costs and prices of unbundled loops.

---

<sup>2</sup> D.99-11-050, *mimeo.*, p. 168.

<sup>3</sup> All dates are 2001 unless otherwise noted.

- A motion filed by Pacific in the above-captioned OANAD proceeding requesting that the Commission defer any re-examination of the costs and prices of UNEs until the United States Supreme Court has completed its consideration of the challenge to the Eighth Circuit's order on the FCC's TELRIC cost standards.<sup>4</sup> In the alternative, Pacific recommends that if its motion to defer is denied, the Commission should re-examine the cost of the Expanded Interconnection Service Cross Connect (EISCC).

On March 28, the assigned Administrative Law Judge (ALJ) issued a ruling consolidating these applications with the OANAD proceeding for the limited purpose of taking comment on Pacific's motion to defer and on which, if any, UNEs should be re-examined pursuant to D.99-11-050.<sup>5</sup>

#### **B. The Scoping Memo for the 2001 UNE Reexamination**

On June 14, 2001, the Assigned Commissioner and ALJ issued a joint ruling (hereinafter, "Scoping Memo") denying Pacific's motion to defer the UNE Reexamination proceeding. The Scoping Memo agreed with the Joint Applicants and other parties that the Commission retained the independent state authority to review UNE costs and prices and disagreed with Pacific's assertion that, given the case pending at the Supreme Court, the Commission could no longer rely on TELRIC. Specifically, the Scoping Memo found that the stay of the Eighth Circuit's order had the effect of maintaining the status quo, which means

---

<sup>4</sup> *Iowa Utilities Bd. v. F.C.C.*, 219 F.3d 744 (8<sup>th</sup> Cir. July 18, 2000), *cert. granted*, *AT&T Corp. v. Iowa Utilities Bd.*, 121 S.Ct. 878, 69 U.S.L.W. 3283 (U.S. Jan. 22, 2001) (No. 00-590).

<sup>5</sup> Comments were filed on April 20 by Joint Applicants, the California Association of Competitive Telecommunications Companies (CALTEL), Communications Workers of America District 9 (CWA), Office of Ratepayer Advocates (ORA), Pacific, The Utility Reform Network (TURN), Telephone Connection, and Z-Tel Communications, Inc. (Z-Tel).

that the FCC's TELRIC rules remain in effect. Further, the Scoping Memo stated that the Commission should move forward with its review of selected UNEs rather than await the outcome of federal litigation so that competitors would not have to pay prices for another year based on costs adopted in 1998.

The Scoping Memo stated that the summary of evidence presented by Joint Applicants led to a reasonable presumption that costs may have declined for unbundled switching and unbundled loops. Therefore, the Assigned Commissioner and ALJ found sufficient justification to accept the nominations of these two UNEs for review and initiate the UNE Reexamination proceeding.<sup>6</sup> The Scoping Memo set a schedule for Pacific to file switching and loop cost studies on August 15 and stated that, in the interests of moving quickly on the cost re-examination, competing cost models filed by other parties would not be allowed.

### **C. The Issue of Competing Models**

At a prehearing conference (PHC) on July 9, Joint Applicants urged that the Commission allow them to file a competing cost model. In a July 11 ruling, the Assigned Commissioner and ALJ reiterated that it was appropriate to limit the scope of the proceeding to review of Pacific's model as long as it met three criteria. Specifically, the July 11 ruling required that Pacific's cost models and cost studies must allow parties to:

- Reasonably understand how costs are derived for unbundled loops and switching,
- Generally replicate Pacific's calculations; and

---

<sup>6</sup> The Scoping Memo went on to deny Telephone Connections' nomination of the DS-3 entrance facility without equipment and Pacific's nomination of the EISCC. These denials are affirmed by today's order.

- Propose changes in inputs and assumptions in order to modify the costs produced by these models.

The July 11 ruling left open the question of whether to allow the introduction of competing cost models if Pacific's filing failed to satisfy the criteria. In addition, the ruling required Pacific to provide Joint Applicants and any other requesting party with an advance electronic copy of the cost model or studies that Pacific would use as the starting point for its August 15<sup>th</sup> cost filing. Pacific provided this advance "starting point" to the parties on July 26.

The ALJ held a technical workshop on August 9 to have Pacific explain its "starting point" model and how it met the three criteria set forth in the July 11 ruling, and to allow staff and other parties to ask questions about the model. Following the workshop, comments were filed by Joint Applicants, TURN, and ORA and reply comments were filed by Pacific. In general, the comments criticized Pacific's "starting point" as not meeting the three criteria cost model because it was not an actual cost model, but merely a set of adjustments to the outputs of the models used to develop costs and prices in prior OANAD decisions.<sup>7</sup> Joint Applicants and other parties stated that several of the prior models are no longer available and it is not possible to re-run them with new inputs.

---

<sup>7</sup> The prior OANAD decisions referred to are D.98-02-106 and D.99-11-050 in Rulemaking (R.) 93-04-003/Investigation (I.) 93-04-002.



In its reply, Pacific did not dispute that its filing involves adjustments to the outputs of the prior OANAD model and that it is not possible to provide the previously adopted model with new inputs. Nevertheless, Pacific defended its “starting point” and updated loop and switching cost studies filed August 15 as meeting the three criteria from the July 11 ruling. Pacific maintains that its starting point “maps back to the OANAD results” and that it provided source references that tie back to the data originally filed in OANAD. (Pacific’s Workshop Comments, 8/23/01, p. 3.) Pacific contends that its filings allow parties to understand how costs in the update were derived from OANAD adopted outputs and to replicate Pacific’s updated numbers. Pacific also maintains that parties can vary assumptions by “trac[ing] back through the OANAD data to reflect a change in cost.” (*Id.*, p. 9.)<sup>8</sup>

#### **D. Motion for Interim Relief**

On August 20, Joint Applicants filed a Motion for Interim Relief, asking the Assigned Commissioner and ALJ to order Pacific to offer UNE prices for unbundled switching and unbundled loops at interim rates as set forth in the motion. Specifically, Joint Applicants propose an interim reduction of 36% in Pacific’s UNE loop rates based, in part, on estimates of Pacific’s forward-looking costs using the HAI model. For unbundled switching UNE rates, Joint Applicants proposed that Pacific set rates equivalent to either of two rate proposals made by Pacific’s affiliate, SBC-Ameritech, in Illinois. If adopted, the Illinois switching rates would amount to essentially a 70% reduction from

---

<sup>8</sup> On September 28, Pacific filed a revised “linked version” of its cost filing that links various cells on its spreadsheets so that changes in one cell’s value are reflected in all linked cells.

current switching rates. Joint Applicants again support this request using the HAI model as well as the FCC's Synthesis Model.

Joint Applicants justify the need for an immediate rate reduction by citing delays caused by alleged inadequacies in Pacific's starting point and August 15 cost filing and the need for the Commission to consider competing cost studies. Joint Applicants claim Pacific is charging inflated UNE prices that cause irreparable harm to competitive carriers. Finally, Joint Applicants ask that the interim rates be subject to "true-down"<sup>9</sup> as a sanction against Pacific for alleged misleading statements regarding its cost studies and delays in the proceeding.

Responses to the motion for interim relief were filed by Pacific, ORA, TURN, and Tri-M Communications (Tri-M). Pacific opposes the motion stating that 1) Joint Applicants have not justified the need for interim relief because they have not shown a need for emergency action by the Commission; 2) any grant of interim relief without a hearing or adequate opportunity to develop the required evidence would violate Pacific's due process rights; 3) the Commission cannot rely on the HAI Model for interim rates because it allegedly violates the Telecommunications Act requirement that UNE prices be based on cost; and 4) the proposal for a "true-down" violates state and federal law. The other parties all filed comments in support of the motion, and Joint Applicants filed a reply to Pacific Bell's response.

---

<sup>9</sup> Essentially, a "true-down" means that if final rates are lower than interim rates, Pacific Bell should provide refunds to those who purchase unbundled loops or switching UNEs, but if rates are ultimately higher than any interim rate, buyers of these UNEs would not owe any additional payment.

On September 13, 2001, the ALJ held a prehearing conference regarding the motion for interim relief.

On September 28, the Assigned Commissioner and ALJ issued a joint ruling stating a desire to consider interim relief, but requiring additional filings from parties on the exact amount and the nature of the interim relief proposals. The September 28 ruling stated that interim relief appeared justified because Pacific's August 15 cost filing did not meet the three criteria established in the July 11 ruling.

### **III. Interim Rates are Warranted**

This decision affirms the Assigned Commissioner's and ALJ's September 28 joint ruling regarding the need for interim relief. We affirm the ruling's conclusion that the Commission has the authority to set interim rates and has done so on numerous occasions. Despite Pacific's argument to the contrary, interim rates need not be premised on an "emergency" alone, but can be adopted for other reasons, including procedural delays. The California Supreme Court addressed precisely this issue in *TURN v. CPUC* (44 Cal. 3d 870, 878 (1988)). In the underlying decision, the Commission granted an interim rate increase while expressly declining to make any finding that the "the interim rate increase was required by a financial emergency, or that the reasonableness of the pertinent costs was undisputed." (*Id.* at 875.) The Commission's decision was upheld by the Supreme Court, which found that the overriding circumstance

was the prospect of many months and years of hearings and deliberations before a final rate could be determined. (*Id.* at 879.)<sup>10</sup> The court affirmed that the Commission could set interim rates as long as the rate is subject to refund and sufficient justification for the interim relief has been presented. (*Id.* at 880.)<sup>11</sup>

Our action today to set an interim rate for the loop and switching UNEs is not precluded by D.99-11-050. In that 1999 order, we stated that the rates adopted therein would remain in effect until changed by an order in the annual UNE reexamination. The 1999 order does not limit our ability to consider and establish interim UNE rates in this UNE Reexamination proceeding.

Interim rates are necessary due to delays in this proceeding caused by the need to examine competing cost models. The Assigned Commissioner and ALJ initially limited the scope of this proceeding to an examination of Pacific's updated cost studies. Despite repeated requests from Joint Applicants to allow them to submit their own cost studies, the Assigned Commissioner and ALJ rejected the notion of competing cost studies unless Pacific's filing failed to meet three criteria. Following an August 9 workshop to understand Pacific's "starting point" for its upcoming cost filings, Joint Applicants and other parties alleged that Pacific was not actually filing updated versions of the earlier cost models.

---

<sup>10</sup> See also *Re Southern California Edison Company* (28 CPUC 2d 203, 212 (1988) D.88-05-074), which held that "the existence of a financial emergency is no longer a standard which must be met in granting interim relief." The order also notes that full consideration of the issues in the case has delayed the case and is another factor in granting interim relief. (*Id.* at 212.)

<sup>11</sup> The adoption of interim rates is not limited to energy matters. (*See* 80 CPUC 462, 465 (1976) D.86352, wherein the Commission approved "interim provisional rates" at the request of Pacific for its "Dimension PBX" service as a result of delays in the proceeding to establish permanent prices for the service.)

These parties claimed that Pacific was merely filing adjustments to the outputs of the models used to set costs and prices in the prior OANAD proceeding. (*See* Joint Applicants Workshop Comments, 8/14/01; TURN Workshop Comments, 8/14/01.)

After review of these claims of insufficiencies in Pacific's filing, the ALJ and Assigned Commissioner determined that Pacific's filing did not meet the three criteria they had set forth. We agree that Pacific's "starting point" filed on July 26 and its updated cost studies filed on August 15 do not meet the criteria set forth in the July 11 ruling. Specifically, Pacific uses endpoints from OANAD and adjusts them rather than actually providing the former model with new inputs. Pacific's subsequent filing of a "linked version" does not correct this problem because it still does not provide the original model on which the calculations are based.

Pacific's filing fails the first and second criteria set forth in this proceeding because parties and staff may find it difficult to understand and replicate the calculations and the inputs of the prior OANAD models without the ability to run these models. Pacific itself is not replicating its prior OANAD models since it is not performing new runs of the SCIS model for switching investment, the Cost Proxy Model for loop investment, or other mainframe models used to calculate expenses and support investments. In other words, Pacific did not input changes to the prior OANAD model. Instead, as the Joint Applicants and other parties claimed, Pacific merely calculated the effect of estimated changes by adjusting the outputs of the prior OANAD model. While Pacific's "linked version" allows parties to trace through Pacific's calculations, it is not a model that constructs a forward-looking network. Finally, Pacific's filing fails the third criteria because parties cannot input their own numbers to Pacific's models and

re-run them. Thus, it is impossible for parties to modify assumptions from the prior OANAD models.

Without the ability to modify assumptions and re-run the models, it is unclear how the evidence and assumptions that formed the basis for Joint Applicant's initial showing to open this proceeding can actually be tested, modified, and examined.

In their September 28 ruling, Commissioner Wood and ALJ Duda stated:

We are concerned that if we were to proceed only with the filing presented by Pacific, any resulting UNE prices might not be cost-based as required by Section 252 of the Telecommunications Act of 1996. We will have less confidence in the results of our efforts without the ability to run an actual model and test inputs and assumptions. It is not clear if Pacific can amend its filing to overcome the problems identified. Because Pacific's filing does not currently meet our criteria, we are faced with the option of allowing Joint Applicants and other parties to file competing cost models.

...

Because of the substantial delay in the case that would be caused by either allowing Pacific to amend its filing or by considering competing filings, we are persuaded to grant some form of interim relief. (9/28 Ruling, p. 5.)

The September 28 ruling noted that Joint Applicants had provided an adequate initial showing in their initial April 20 filing in this case to support a reasonable presumption that costs for unbundled loops and unbundled switching had declined from previously adopted costs. Yet, Pacific's August 15 cost update filing does not allow the Commission staff, the Joint Applicants, or other parties to test this initial showing. For example, Joint Applicants provide

ARMIS<sup>12</sup> data indicating that Pacific's switch investments have declined 40% on a per minute of use basis from 1994 to 1999 due to increases in minutes of use and insignificant increases in switching investments. (Pitts Declaration for Joint Applicants, 2/21/01, para. 12.) Further, they provide data indicating that the price for adding "growth lines" has declined significantly since 1996. (*Id.*, para. 13.) Joint Applicants also indicate that based on service volume and cost data that Pacific reported to the FCC, Pacific's switching-related expenses and support investments have declined 23% (on an expense per line basis) and 32% (on an expense per minute basis) since 1994. (Murray Declaration for Joint Applicants, 2/20/01, para. 8-10.)

Regarding costs for unbundled loops, Joint Applicants assert lower capital costs due to Pacific's "Project Pronto," a large-scale upgrade of its fiber and digital loop carrier (DLC) facilities. (Murray/Donovan Declaration for Joint Applicants, 2/28/01, para. 24.) They also assert economies of density from a 48.5% increase in total access lines from 1994 to 1999. (*Id.*, para. 18.) Joint Applicants' figures for access line growth are based on ARMIS data that Pacific reports to the FCC. In addition, Joint Applicants claim that certain DLC equipment costs have dropped to as low as 25% of the initial price. (*Id.*, para. 30.) Pacific has not disputed a decline in DLC equipment costs,<sup>13</sup> and it does not dispute the ARMIS data cited by Joint Applicants on volume and line growth.

---

<sup>12</sup> ARMIS (Automated Reporting Management Information System) is a data collection and information system maintained by the FCC. It contains data that incumbent local exchange carriers such as Pacific provide to the FCC pursuant to FCC reporting requirements.

<sup>13</sup> Regarding DLC equipment, "Pacific Bell does not dispute that DLC equipment prices have fallen in recent years." (Pacific Loop Comments, 10/19/01, p. 7.)

Furthermore, Pacific admits that it benefits from SBC-wide purchasing of switches and can obtain switches in California for a lower price than in Illinois.<sup>14</sup> Joint Applicants point out that SBC has proposed UNE rates for switching in Illinois that are drastically lower than the current switching rates in California.

Considering that many of Joint Applicants' assertions begin with Pacific's publicly reported data, it is reasonably plausible that at least some of these factors will lead to decreases in UNE rates for loops and switching. Nevertheless, Pacific's filings have left the Commission and parties without the ability to test or examine the effect of these documented and undisputed changes involving line growth, corporate mergers, switching investments and DLC technology. Pacific generally states that many of the cost declines shown in the public data from 1994 to 1999 were actually considered and included in the forward-looking models that developed the costs the Commission adopted in 1998. Unfortunately, the Commission has no way to verify this claim without the ability to replicate the costs adopted in 1998 using a model provided by Pacific.

Essentially, Pacific has presented us with a "black box" that does not allow us to test the summary of evidence that initially persuaded the Commission to open the case. The Commission must either trust Pacific's "black box" without further scrutiny, or delay the case while the Commission investigates other models or a revised model from Pacific. Neither of these options is acceptable.

---

<sup>14</sup> Regarding switching costs, "Pacific Bell today still enjoys the benefits of volume purchases" under a "new SBC-wide agreement." (Kamstra Declaration for Pacific, 4/20/01, para. 6.) Pacific admits that it can obtain switches for use in California at prices equal to, or more favorable than, the prices at which it can buy switches for Illinois. (See Joint Applicants' Switching Reply Comments, 11/9/01, p. 8, citing a Pacific Bell discovery response.)



This case was initiated based on a summary of evidence of cost declines. Delays in this case could lead to prolonging current rates at non-cost-based levels.

Under Section 252 of the Telecommunications Act of 1996, this Commission is required to set UNE rates based on cost. (47 U.S.C. § 252 (d)(1).) We cannot in good conscience succumb to the delays caused by the inadequacies of Pacific's filing in the face of this preliminary evidence that costs have declined.

Our decision to set interim rates is in part supported by a recent order of the D.C. Circuit in *Sprint Communications Company v. FCC*.<sup>15</sup> In the *Sprint* decision, the D.C. Circuit was asked to review the FCC's decision to grant in-region long distance authority to SBC for Kansas and Oklahoma. Appellants asked the D.C. Circuit to overturn the FCC's findings that UNE rates for Kansas were cost-based, claiming that the FCC could not properly find the rates in these states TELRIC compliant because "they are the product of a crude 'settlement' method, trimmed by an arbitrary 25% 'haircut.'" (*Id.*, at \*22.) In its decision on the appeal, the court declined to overturn the FCC's finding that Kansas UNE rates were cost-based and specifically noted that it could not find fault with the FCC "for approving the Kansas Commission's compromise resolution of an issue that the parties' behavior had left a muddle." (*Id.*, at \*25.) The court also discusses the difficulty in pinpointing TELRIC rates with exactitude and cites to a prior case where it stated:

This argument, however, assumes that ratemaking is an exact science and that there is only one level at which a

---

<sup>15</sup> *Sprint Communications Company v. F.C.C.*, 2001 U.S. App. LEXIS 27292, (D.C. Circ. December 28, 2001) (No. 01-1076). On January 7, 2002, Joint Applicants and Pacific jointly requested the Commission take notice of this D.C. Circuit decision. We herein grant that request.

wholesale rate can be said to be just and reasonable....  
However, there is no single cost-recovery rate, but a [wide]  
zone of reasonableness.... (*Id.*, at \*12-13, citing *Conway*, 426  
U.S. at 278.)

The reasoning of the D.C. Circuit case supports our interim resolution of this proceeding which the deficient cost filing of Pacific has, in some ways, “left a muddle” for the Commission to unravel. Furthermore, given the acknowledgement by the D.C. Circuit’s order that TELRIC ratemaking is not an exact science and involves a “zone of reasonableness,” we find support in the order for this Commission’s discretion to adopt interim UNE rates.

By setting interim UNE rates for unbundled loops and switching, the Commission is not violating Pacific’s due process rights. Pacific was given ample opportunity to comment on the proposed interim rates through an additional round of comments that were solicited by the Assigned Commissioner and ALJ. The rates will be subject to adjustment once final rates are determined, either up or down. Thus, Pacific is not harmed by the interim rate levels.

In summary, we find that that interim relief is warranted based on the substantial delays looming in this case caused by the inadequacies of Pacific’s cost filing. Interim relief is also warranted based on the summary of evidence initially provided by Joint Applicants indicating a reasonable presumption of cost declines for unbundled loops and unbundled switching.<sup>16</sup>

---

<sup>16</sup> On October 9, Pacific filed an Appeal to the Full Commission of the September 28 ruling. We decline to entertain this interlocutory appeal and it is herein denied. On October 19, Pacific filed a motion to vacate the September 28 ruling on the grounds that a pending motion in R.93-04-003/I.93-04-002/R.95-04-043/I.95-04-044 (“Section 271 Proceeding”) involving a proposed discount to unbundled switching prices moots the need for interim relief. The motion in the Section 271 proceeding proposes a 20% discount to UNE switching rates on the condition that the Commission approves

*Footnote continued on next page*

Before we turn to the substance of the relief requested, we must address Pacific's criticisms of the HAI model that underlies the interim relief request. Joint Applicants' proposed interim relief is primarily based on analysis and documentation involving the HAI model and the FCC's Synthesis model. We recognize that the FCC and other states have criticized aspects of prior versions of the HAI model, particularly HAI's assumption of uniform customer dispersion. (Tardiff Declaration for Pacific, 9/4/01, p. 3.) Pacific also criticizes the total investment and expense levels produced by HAI as too low when compared with actual figures. (*Id.*, p. 2.)

Nevertheless, Joint Applicants defend HAI, stating that the current version 5.2a is improved over all earlier ones. For example, Joint Applicants maintain that HAI's use of geocoded customer location data addresses the customer dispersion problem and is mirrored by other models currently in use, including the FCC's Synthesis Model. (Klick Testimony for Joint Applicants, 8/20/01, p. 21.) Joint Applicants also contend that they are not basing the requested interim relief on the absolute output of HAI, but on a trend analysis of its outputs from 1994 to 2000. Joint Applicants reason that any systematic bias in HAI's calculation of the absolute level of investments and expenses does not impact the discounts determined through the trend analysis. (Bryant Declaration for Joint Applicants, 9/7/01, p. 2.)

We agree with Joint Applicants that because HAI is used for a trend analysis in loop and switching costs over the 1994 to 2000 time period, any

---

Pacific's Section 271 application. We will deny Pacific's motion to vacate the September 28 ruling because we are not persuaded to amend the schedule of the UNE

*Footnote continued on next page*

criticism of its actual outputs are of lesser significance. While it is true that this Commission and the FCC have rejected prior versions of HAI, and the HAI model has its recognized shortcomings, it is the only actual “model” that has been filed thus far in the record of this proceeding to update UNE prices for loops and switching. We will use the trend analysis based on the HAI model to set interim prices, even if the model has elements that we disagree with, rather than relying on Pacific’s cost filing, because we cannot adequately test and model all inputs with Pacific’s filing. In other words, we will base the interim relief on the analysis presented using the HAI Model, but this does not prejudice the methodology or cost model we will use to set UNE rates in a later phase of this proceeding. We are not endorsing use of the HAI or the Synthesis models to set final updated UNE rates for unbundled loops or unbundled switching.

#### **IV. Pacific Should be Sanctioned for Failure to Comply with the ALJ’s Discovery Rulings**

During the course of this proceeding, Joint Applicants submitted a data request to Pacific requesting models, spreadsheets and other documentation supporting various UNE costs that were either proposed to or adopted by regulators in Illinois and Michigan for SBC-affiliated companies, namely SBC-Ameritech. On August 13, the assigned ALJ and the Law and Motion ALJ conducted a hearing to consider these requests and overruled Pacific’s objections to production of this material on the grounds that the material was relevant to the proceeding. Pacific moved for reconsideration of this ruling, based on the claim that out-of-state cost data is not relevant to the issues in this proceeding.

---

Reexamination based on a conditional proposal that is currently pending in another docket.

On October 3, the assigned ALJ denied this motion on the grounds that the material was relevant because it involved information and cost methodologies currently advocated in other states by Pacific's parent, SBC, and because Pacific has admitted it purchases major network components through SBC from common vendors and under SBC-wide purchasing arrangements.<sup>17</sup>

On October 12, Pacific filed an interlocutory appeal requesting that the Commission overturn the earlier ALJs' ruling and stay the ruling pending decision on the appeal. In its appeal, Pacific argues that the requested material does not belong to Pacific, was developed by Ameritech prior to Ameritech's merger with SBC, and is held by SBC-Ameritech. Essentially, Pacific asserts it does not have "control" over these SBC-Ameritech documents and thus does not have to produce them. Pacific does not appeal the relevancy of this material. To date, Pacific has not produced any of the requested documents that it was ordered to produce pursuant to the August 13 and October 3 ALJ rulings and there has been no stay of the earlier ruling ordering Pacific to produce the documents.<sup>18</sup>

On February 21, 2002, the Assigned Commissioner issued a ruling imposing sanctions on Pacific for failure to comply with the ALJs' earlier

---

<sup>17</sup> See Declaration of Mark Kamstra for Pacific, 4/20/01, para. 6, filed as an attachment to "Response of Pacific to ALJ's Ruling Consolidating Dockets for Limited Purpose and Setting Comment Schedule, and Response to Joint Applicants' Emergency Motion."

<sup>18</sup> In addition, on October 31 Pacific filed a "Motion for Official Notice of a Public Utility Commission of Texas Order," stating that a recent Texas order supports its appeal on this discovery matter. Joint Applicants filed a response in opposition to the motion. On November 20, Pacific filed a motion to strike the response of Joint Applicants to the October 31 motion. Both motions are denied herein as moot because the Commission declines to hear Pacific's interlocutory discovery appeal.

discovery rulings. Specifically, the Assigned Commissioner ruled that the SBC-Ameritech cost information that Pacific refused to produce would be deemed to support the adoption of interim rates for unbundled loops and unbundled switching that are lower than current rates. The Assigned Commissioner also ordered Pacific to produce the disputed material within 10 days from the date of the ruling, or risk further sanctions, including monetary penalties, in subsequent orders in this proceeding.

By this order, we affirm both the ALJ rulings requiring Pacific to produce out-of-state cost information and the Assigned Commissioner's ruling imposing an issue sanction against Pacific for its noncompliance with the ALJ rulings. As noted in the Assigned Commissioner's ruling, the Commission has the power to impose discovery sanctions where litigants violate discovery procedures and rulings of the presiding officer.<sup>19</sup>

With regard to Pacific's appeal of the ALJs' rulings, we note that the Commission generally looks with disfavor on interlocutory appeals of ALJ rulings. (45 CPUC 2d 630. *See also Pacific Enterprises*, 79 CPUC 2d 343, 421.) Under Commission Rule 65, the Commission may review evidentiary matters under two circumstances, either when considering the matter on its merits or when the presiding officer refers the matter to the Commission. In this case, the presiding officer did not refer the matter. Furthermore, we decline to entertain this interlocutory appeal and request for stay for the reasons stated below.

---

<sup>19</sup> *See Assigned Commissioner's Ruling Imposing a Sanction Against Pacific for Failure to Comply with Discovery Rulings*, 2/21/02, p. 8. *See also Pacific Enterprises*, 79 CPUC 2d 343, 421-422 (D.98-03-073), wherein the Commission affirmed the use of evidentiary sanctions against a utility for failure to produce documents.

First, as we stated in *Pacific Enterprises*, the presiding officer must have the authority to rule on discovery motions and impose sanctions for discovery abuse. Without this authority, material evidence would remain undisclosed or unconscionable delay would occur as parties seek relief from the Commission.

Second, even if the Commission chose to entertain Pacific's interlocutory appeal and stay request, it would be denied. The Commission generally refers to California's Code of Civil Procedure (CCP) for guidance with regard to discovery procedures.<sup>20</sup> The CCP and the similarly worded Federal Rules of Civil Procedure require a party to produce documents within its "possession, custody, or control."<sup>21</sup> In his February 21, 2002 ruling, the Assigned Commissioner disagreed with Pacific's claim that it does not have custody or control over out-of-state cost information based on a review of the relationship between Pacific, SBC, and SBC-Ameritech. The Assigned Commissioner noted that federal courts have found a subsidiary can have control over its corporate parent's or a fellow subsidiary's documents.<sup>22</sup> Evidence the courts have considered to determine whether such control exists includes the degree of ownership and control the parent exercised over the subsidiary, whether the two entities operated as one, whether an agency relationship existed, and whether there was demonstrated access to documents in the ordinary course of business. Using this analysis, the Assigned Commissioner found that Pacific does have a close relationship with SBC-Ameritech, SBC has exercised control

---

<sup>20</sup> See, e.g., P.U. Code Section 1794 (the Commission or any party may depose witnesses pursuant to the Code of Civil Procedure and compel the production of documents).

<sup>21</sup> C.C.P. section 2031 (a)(1); F.R.C.P. 34(a).

<sup>22</sup> Assigned Commissioner's Ruling, 2/21/02, p. 4-5.

over Pacific, and there is demonstrated access to SBC and SBC-Ameritech documents in the ordinary course of business.<sup>23</sup>

In affirming the ruling of the Assigned Commissioner, we share his concern that Pacific appears to selectively exclude data from SBC-affiliated operations. As the Assigned Commissioner noted, Pacific has already produced documents developed outside of Pacific by other SBC-affiliated entities in the course of this case. Moreover, Pacific has waived any argument that it does not have access to and/or control of documents of its affiliates and parent company by producing documents and witnesses of SBC and SBC-Ameritech in the course of this proceeding. We will not tolerate Pacific's blatant disregard for the rulings of the presiding officer. Pacific's non-compliance has deprived Joint Applicants of the benefit of reviewing material that was deemed relevant to the proceeding, and has prejudiced Joint Applicants in this proceeding by withholding evidence relevant to the issue of cost modeling and costs throughout the various states in which SBC operates. This material may have a bearing on costs in California. If we permitted Pacific's actions, this would set the dangerous precedent of allowing an entity to hide information from the Commission by developing and maintaining it at one of its sister companies or at its corporate headquarters. We agree wholeheartedly with the Assigned Commissioner that Pacific should not be able to pick and choose which information it will provide to the Commission.

---

<sup>23</sup> The Assigned Commissioner noted that Pacific's, SBC's, and SBC-Ameritech's operations are closely intertwined given that 1) SBC makes purchasing decisions for both Pacific and SBC-Ameritech, 2) Pacific uses SBC employees for testimony in this proceeding on costing, 3) Pacific has produced other material from SBC during the course of this proceeding, and 4) Pacific has used the same witness used by SBC-Ameritech in Illinois to support its testimony in California. (*Id.*, p. 5-6.)



Therefore, we will not entertain Pacific's interlocutory appeal and we uphold the sanctions imposed on Pacific by the Assigned Commissioner for Pacific's non-compliance with prior rulings.

## **V. Interim Rates for Unbundled Loops**

### **A. Joint Applicants Proposal**

In their motion for interim relief, Joint Applicants request a statewide average loop rate of \$7.51 for the basic (2-wire) loop.<sup>24</sup> This rate represents a 36% discount from the current statewide-average loop rate of \$11.70.<sup>25</sup> In support of this request, Joint Applicants note a decline in forward-looking loop costs since 1994. Specifically, they cite reduced prices for DLC electronics that have dropped roughly 38% between 1994 and 2001. (Joint Applicants' Motion for Interim Relief, 8/20/01, p. 10.) They also report that Pacific's reported total of switched access lines grew from 15 million lines in 1994 to almost 19 million lines in 2000. (*Id.*)

Along with the motion, Joint Applicants provide testimony by witnesses Bryant, Mercer and Klick regarding estimates of Pacific's forward-looking costs for unbundled loops using the most recent versions of the HAI model and the FCC's Synthesis model. Dr. Bryant performed an analysis of the sensitivity of cost results calculated by the HAI model by changing two key input values, the cost of DLC equipment and demand levels. (Bryant Testimony, 8/20/01, p. 5-6.) According to his testimony, Bryant used the HAI model to

---

<sup>24</sup> This decision adopts an interim rate for the basic loop only, and does not set interim rates for any other loops, such as the 4-wire, DS-1 or DS-3.

<sup>25</sup> \$11.70 is the statewide-average loop price that the Commission adopted in D.99-11-050 based on the costs adopted in D.98-02-106.

simulate a 1994 view of forward-looking costs for California as constrained by the key input values that were adopted by the Commission in prior OANAD decisions. He then used this starting point to change DLC equipment and demand levels for 2000 and compared HAI's outputs for 1994 and 2000. Bryant states that the combined effect of these two input changes is a 36% decrease in average loop cost from 1994 to 2000. (*Id.*, p. 6.) Joint Applicants claim that the Synthesis Model confirms this loop cost analysis. Based on this percentage change in the model output after changing only two inputs, Joint Applicants request a 36% reduction from the UNE loop rates adopted in D.99-11-050.<sup>26</sup>

## **B. Response**

On October 19, Pacific filed substantive comments in response to the proposed 36% loop rate reduction. Pacific maintains that the three cost drivers relied on by Joint Applicants -- line growth, DLC electronics costs, and expenses -- do not support a 36% reduction in current UNE loop prices. We will

---

<sup>26</sup> Joint Applicants contend that further circumstances most likely lead to an even lower rate, and therefore the 36% reduction that they request is likely conservative. Joint Applicants maintain that existing UNE loop costs are based on assumptions regarding "fill factors" and the amount of structure that is shared (*e.g.* poles, trenches) that the FCC has found to be inappropriate for a forward looking analysis. If fill factors and structure sharing assumptions were increased to levels that the FCC has found to be forward looking, Joint Applicants claim that the discount from current rates would be higher than the proposed 36%. (Joint Applicants' Loop Reply Comments, 10/30/01, p. 21.) "Fill Factor" is a manner of expressing the percentage of Pacific's loop plant capacity that is in use as opposed to spare capacity. If a network has 30% spare capacity, then the network's fill factor is 70%.

discuss Pacific's criticisms of Joint Applicant's proposal, and responses to Pacific's criticisms, by issue below.<sup>27</sup>

## **C. Discussion**

### **1. Line Growth**

Pacific states that Joint Applicants' line growth assumptions in the HAI model are flawed because they incorrectly treat special access facilities, particularly DS-1 and DS-3 lines, as ordinary copper loops. For example, Joint Applicants have attributed 24 lines to each DS-1 line and 672 lines to each DS-3 line because these lines carry 24 and 672 "voice grade equivalent" (VGE) channels. In contrast, Pacific notes that a DS-1 line consists of merely two copper loops, while a DS-3 line is provisioned over fiber so it does not involve any copper loops. According to Pacific, the net effect of Joint Applicants' use of VGEs is to overstate the number of loops in Pacific's network by about 10 million. Further, these inflated line assumptions produce illusory "scale economies," such as larger cable sizes and excess structure sharing, which understate Pacific's loop costs. (Pacific Loop Comments, 10/19/01, p. 4.)

Joint Applicants defend their modeling of line growth by claiming that the VGE method is well accepted and conservative. Joint Applicants cite examples of the FCC endorsing the use of line counts based on VGEs in its Synthesis Model, although they note that the FCC ultimately adopted a methodology that develops the network on a physical pair basis and divides the resulting total investment by the number of voice grade equivalents. (Klick

---

<sup>27</sup> Reply comments on interim loop prices were filed by ORA, TURN, Joint Applicants, Mpower Communications Corporation (Mpower). The comments of Mpower were subsequently stricken in a 12/6/01 ALJ ruling.

Declaration, 10/30/01, p. 5.) Joint Applicants claim that using VGEs to model line growth is actually conservative because treating each channel on a DS-1 or DS-3 line as a copper line adds more cost per line than Pacific would actually incur to provision services using fiber. (Donovan Declaration, 10/30/01, p. 3.) They also note that Pacific has admitted significant volume growth for high capacity services provided over DS-1 and DS-3 facilities. Joint Applicants state that any analysis of line growth must be based on VGEs because DS-1 and DS-3 lines share outside plant structure with basic loop facilities. They allege that if DS-1 and DS-3 growth is not incorporated into the analysis, loop costs for basic unbundled loops will be overstated and this will shift shared costs to basic loops and force basic service to cross-subsidize business service.

In support of Joint Applicants' use of VGEs, ORA notes that Pacific itself measures wire-line growth in terms of VGEs. ORA maintains that line growth should be based on VGEs because it is not appropriate for the Commission to only consider the costs of copper loop plant when that plant is being replaced with less expensive and more cost effective fiber transport and distribution. (ORA Loop Comments, 10/30/01, p. 3.)

TURN contends that Pacific's analysis is contradicted by its own public data. The FCC's ARMIS database indicates that the total number of access lines in 2000 was 29.6 million. Further, TURN claims that all services that share facilities such as cables, conduit, trenches and remote terminal facilities should benefit from the economies of scale that have resulted from Pacific's substantial line growth. According to TURN, the net effect of Pacific's approach of excluding VGEs from any estimate of line growth is to "unreasonably shift costs away from the telecommunications lines utilized by large business customers and onto the loops utilized in the provision of residential and small business

basic exchange services.” (TURN Loop Comments, 10/30/01, p. 2.) In other words, if line growth is understated, this has the effect of causing higher per line costs for basic exchange loops.

For this interim rate setting exercise, we prefer to adopt a more conservative approach rather than a modeling technique that admittedly overstates the number of copper lines in Pacific’s network. Although the FCC used VGEs for its Synthesis Model, parties admit that this model was not developed for UNE cost purposes but for universal service purposes. The goals of a model for UNE costing and universal service are quite different. As we develop interim estimates of costs for Pacific’s loops, we are concerned that overstating the number of copper lines could create assumptions of scale economies in Pacific’s network that are not realistic. Although we agree with TURN and ORA that we should not ignore the undisputed growth of special access services, we prefer to account for it on a physical pair basis at this interim phase. We will not adopt a modeling convention that assumes this growth is provisioned entirely over copper when it quite clearly is not. We are troubled by the notion that it is acceptable to overestimate the number of copper lines in the model simply because they are more expensive. Although Joint Applicants, TURN and ORA are concerned that residential users may cross-subsidize business customers, the VGE method would have the opposite effect of allocating the higher costs of a copper-based network to users of fiber-based special access services, potentially violating the TELRIC methodology. We want to avoid creating cross-subsidies in either direction and prefer to take a more careful look at this issue in the next phase of this proceeding.

Joint Applicants acknowledge that the FCC ultimately adopted a methodology that develops the network on a physical pair basis. We are

persuaded to adopt that approach for this interim exercise as well rather than inflating copper line counts to reflect special access lines using the VGE method. We will assign the cost of shared facilities such as conduit, poles, and trenches commensurate with a service's physical use of that facility. Therefore, we will alter the line counts in the HAI model to reflect physical facilities. In other words, we will account for DS-1 lines as two access lines since they are comprised of two pairs of copper, and we will account for DS-3 lines as one access line since they are provisioned over a single strand of fiber. This results in a line count of 16.3 million in 1994, growing to 20.0 million lines in 2000. When we insert these adjusted line counts into the HAI model and perform a comparison of 1994 and 2000 model runs, the net result is a decrease in the loop discount proposed by Joint Applicants from 36% to 25%, and an increase in the proposed interim loop rate from \$7.51 to \$8.73. (See Appendix B.)

## **2. Infill Growth vs. Plant Extension**

Pacific claims that the Joint Applicants' line growth analysis is flawed because it assumes that 100% of growth in Pacific's network since 1994 has been "infill" growth, *i.e.*, growth in already developed areas. Pacific maintains that 70% of the growth in its network over the last several years has been growth to previously unserved areas, or "plant extension" growth, and only 30% has been infill. (Pacific Loop Comments, 10/19/01, p. 5-6.) Pacific alleges that the manner in which HAI models customer growth guarantees lower loop costs because it packs more lines and customer locations into hypothetical local distribution areas, or "clusters." (Tardiff Declaration, 10/19/01, p. 6-7.) Pacific asserts that in reality, plant extension growth tends to be more expensive because it involves the placement of new feeder and distribution facilities and

longer cables. Accordingly, Pacific asserts that the costs of plant extension growth more than offset any potential per loop savings from infill growth.

Joint Applicants respond that Pacific's criticisms of the way HAI models growth are not consistent with accepted forward-looking costing principles. According to Joint Applicants, a cost model should not look at the cost of "infill" vs. "plant extension" growth because that approach only looks at the cost to augment existing plant to serve a new increment of demand since the prior OANAD costing exercise. Instead, a proper forward-looking methodology considers the cost to serve total demand in the most efficient manner possible, constrained only by Pacific's current wire center locations. Joint Applicants claim that HAI uses this latter approach and therefore, Pacific's criticisms are meaningless. (Joint Applicants' Loop Reply Comments, 10/30/01, p. 11-12; Murray Declaration, 10/30/01, p. 3-4.)

In addition, Joint Applicants defend the placement of customers under the HAI model by explaining that HAI uses precise geocoded customer location data to place approximately 65% of the customer base. For the approximately 35% of customer locations that are unknown, the model distributes customers uniformly along all roads within the census block. Joint Applicants maintain that this approach conservatively over-disperses customers and potentially increases loop costs by overestimating loop plant. (Joint Applicants' Loop Reply Comments, 10/30/01, p. 18-19; Mercer Declaration, 10/30/01, p. 7-8.)

ORA challenges Pacific's contention that plant extensions are more costly by noting that Project Pronto and fiber fed "next generation" DLC technology extend central office functions throughout Pacific's outside plant network without long runs of costly copper.

We have already found that because Pacific has not provided us with a model that we can use to test undisputed line growth, we must use the HAI model for this interim pricing effort. While Pacific alleges certain shortcomings in HAI such as potential problems with how it locates customers, we believe these shortcomings are mitigated by our adjustments to HAI to back out the use of VGEs for line counts. When we base line counts on physical facilities, as discussed above, we reduce the extent to which HAI “crams more customers” into existing areas. Further, we agree with Joint Applicants that it is improper for a cost model to consider only the cost of infill or plant extension growth because it should instead consider the cost to serve total demand as set forth in our adopted Consensus Costing Principles.<sup>28</sup> Therefore, we will rely on the HAI model for the interim, irrespective of Pacific’s comments in this area. We reiterate that our use of HAI for interim rates in no way prejudices whether to use HAI for setting permanently revised UNE loop rates.

### **3. DLC Equipment Costs**

Pacific asserts several flaws in Joint Applicants’ analysis of DLC equipment cost reductions. Pacific does not dispute that DLC equipment prices have fallen in recent years.<sup>29</sup> Nevertheless, Pacific claims that Joint Applicants incorporated flawed assumptions into their DLC analysis. These assumptions include 1) an analysis that all remote terminals (RTs) are above-ground while

---

<sup>28</sup> D.95-12-016, Appendix C, p. 3.

<sup>29</sup> *See* Pacific Loop Comments, 10/19/01, p. 7. *See* also Attachment B to these comments wherein declarant Pearsons states that “There is little argument that DLC equipment prices have fallen in recent years,” as well as his statement that “Pacific has reflected this decrease in its August 15 cost study filing” and that the “plug-in price for POTS like service fell 34%.” (Pearsons Declaration, 10/19/01, p. 4.)



ignoring allegedly higher cost underground controlled environmental vaults (CEVs), 2) allocations of DLC site preparation and installation costs that are too low, and 3) unsupported reductions in non-equipment DLC costs. Pacific contends that all of these items overstate the cost savings attributable to falling DLC equipment prices and are not justified.

Joint Applicants respond that they modeled RTs above-ground because that was the assumption Pacific itself used in the adopted OANAD studies. In addition, they claim that CEVs are less costly than RTs on a cost per line basis. (Joint Applicants Loop Reply Comments, 10/30/01, p. 13.) In other words, if HAI had modeled underground CEVs rather than above-ground RTs, the proposed interim prices might be even lower.

Joint Applicants address Pacific's other allegations by stating that site preparation, installation, and non-equipment DLC costs were held constant in the 1994 and 2000 runs of HAI. Therefore, Joint Applicants maintain that those costs play no part in the trend analysis supporting the 36% proposed loop reduction. (*Id.*, p. 13; Donovan Declaration, 10/30/01, p. 8-9.)

We find that Pacific's criticisms of Joint Applicants' assumptions have no merit. First, Pacific does not dispute that RTs were modeled as above ground in OANAD.<sup>30</sup> Indeed, above-ground RTs were the reality in the network at that time. Today, however, comments by both Joint Applicants and Pacific indicate that CEVs are replacing RTs in many locations. Unfortunately, the record is disputed on whether CEVs are more or less expensive than RTs on a

---

<sup>30</sup> Pacific admits in its September 19 testimony that RTs were projected as above ground in the former OANAD studies. (*See* Testimony of Richard Scholl, 9/19/01, p. 29.)

per line basis. We cannot accept Joint Applicants' assertion that CEVs are less costly on a per line basis than RTs without evidence to support this claim. Similarly, we cannot accept Pacific's assertions that CEVs are more costly than RTs. Therefore, we have no record on which to change the original OANAD inputs with regard to RT and CEV costs. This is an area we can explore in setting final rates. For now, we will not change the original OANAD assumptions regarding above-ground RTs. We note that because we make no changes to RT assumptions, this will have no effect on the loop cost trend analysis using HAI.

Second, we find that Joint Applicants only made adjustments for DLC equipment cost reductions and did not vary any other DLC-related costs such as site preparation, installation, and non-equipment costs in their trend analysis using the HAI model. (Donovan Declaration, 10/30/01, p. 8-9.) Again, we find that because non-equipment DLC costs were held constant, they do not impact the trend analysis. We have no basis on which to increase these costs, as Pacific has suggested. Hence, we will reject Pacific's protests on this issue.

#### **4. Loop Expenses**

Pacific claims that Joint Applicants have made unsupported reductions in the expenses for maintaining and repairing loops. Pacific asserts that the reason for this decline in expenses is the application of an "investment/expense factor" embedded in the HAI model. Essentially, Pacific claims that for each dollar decrease in capital expenditures in the HAI loop model, HAI automatically decreases loop expenses by a certain amount. Pacific cites language where the Commission stated that this "investment factor approach is inconsistent with TSLRIC Principles No. 4..." (D.95-12-016, *mimeo*, p. 10) and that simple common sense dictates that even if DLC equipment costs

decline, repair expenses are not automatically reduced. Further, Pacific claims that expenses included in current loop costs are not based on 1994 data but on repair expenses that were trended downward for 1996 and 1997 to reflect forward-looking technology.

Joint Applicants defend their expense analysis by stating that Pacific's expenses have fallen considerably on a per loop basis since 1994. (Joint Applicants' Loop Reply Comments, 10/30/01, p. 14, footnote 36.) Joint Applicants' contend that HAI results track with actual trends and are a realistic reflection of forward-looking loop expense reductions (Klick Declaration, 8/20/01, p. 4, 8-11; Murray Declaration, 8/20/01, p. 5, 26-29, 35-37, 40-41.) Joint Applicants claim that Pacific has not addressed this substantial evidence of expense reductions and does not adequately support its claim that expenses have not dropped in the face of the actual reported data.

Joint Applicants defend their use of expense to investment ratios because they replicate forward-looking expense adjustments without requiring a data-intensive review of each expense account. Joint Applicants also note that the ratios used in HAI are those developed by the FCC for use in its Synthesis Model. Joint Applicants further maintain that Pacific uses this same FCC Synthesis Model to support its proposed 20% switching discount in the Section 271 proceeding.<sup>31</sup>

ORA responds that it is reasonable to assume maintenance expenses have fallen for loops given Pacific's statements that implementation of Project Pronto would pay for itself in maintenance savings. ORA states that the

---

<sup>31</sup> See Pacific's "Motion to Notify Parties of Discounted Switching Prices," filed October 12, 2001 in the Section 271 Proceeding.

forward-looking trends anticipated in the earlier OANAD calculations likely have not fully captured the expense savings associated with Project Pronto.

We agree with Pacific that the use of investment to expense factors in HAI may not be reasonable. The fact that investments in certain technologies may have decreased in price does not mean that all other expenses, such as maintenance, have also dropped. Nevertheless, we will not go so far as to state that an investment factor approach violates the forward-looking cost principles. Indeed, the same decision cited by Pacific as denying an investment factor approach suggests that “partial use of investment factors may help to reduce the possibility of ‘gaming’ in the assignment of maintenance expense.” (D.95-12-016, *mimeo*, p. 12.)

Because we are setting interim rates that will be subject to true-up, we will use a conservative approach and remove the effects of the investment/expense factor approach from the trend analysis to avoid the risk of overstating any loop cost decreases. We think that Pacific has raised valid criticisms of the factor approach so we will not use it to adjust rates for the interim. After we rerun the HAI model keeping expenses constant in the 1994 to 2000 runs, we see that this removal of the factor approach, coupled with our removal of the VGE line count method, has the effect of reducing the relative change in loops costs from 1994 to 2000 from 36% to 15 %. As a result, the interim loop rate proposed by Joint Applicants increases from \$7.51 to \$9.93.

Nevertheless, we find that Joint Applicants have provided preliminary evidence of expense cost declines based on actual data that we will need to explore further when we set final rates for loops. Thus, loop expenses will undergo further scrutiny in the next phase of this proceeding.

### **5. Changing Nominal Dollars to Real Dollars**

Thus far, we have modified Joint Applicants' HAI trend analysis to remove line counts using the VGE methodology and to remove the effects of the investment/expense factors embedded in HAI. These changes reduce Joint Applicants' requested loop discount from 36% to 15%.

In reviewing Joint Applicants' loop trend analysis and making these changes, we note that Joint Applicants compared the nominal outputs of the 1994 and 2000 model runs to derive a percent change in loop rates over that time frame. As we will discuss below, Joint Applicants' provided a switching analysis that compared HAI model runs based on real dollars, rather than nominal ones. To maintain consistency between the loop trend analysis and the switching trend analysis, we will convert our revised HAI loop results to real

dollar terms because when performing a trend analysis, the results should be compared in constant dollars. An analysis of changes in costs from 1994 to 2000 should focus on cost changes in real terms and eliminate the influence of inflation over that time period. If we do not make adjustments for inflation in our analysis, we cannot know for certain if the changes in costs between 1994 and 2000 are the result of inflationary changes or real cost changes. Most people can agree its meaningless to compare the cost of gasoline in 1950 to the cost in 2000 without adjusting for inflation and accounting for changes in the purchasing power of a dollar. By the same token, there is little value in comparing 1994 HAI results to 2000 HAI results, if the results from both years are left in nominal dollars.<sup>32</sup>

The fundamental purpose of this proceeding is to determine the costs of Pacific's unbundled network elements. If costs for certain network components have changed from 1994 to 2000, we want to know the true magnitude of these cost changes. If costs have declined, as Joint Applicants allege, at a time when most other costs have increased due to inflation, the true magnitude of the cost changes is understated unless we compare 1994 and 2000 costs in real terms. In other words, we want the results of our trend analysis to indicate the true cost changes in constructing a local network from 1994 to 2000. If we do not adjust our results to put them into constant dollars, competitive carriers who purchase UNEs at these interim rates may be paying too much because the real cost of these UNEs could be lower.

---

<sup>32</sup> It is a common practice for the Commission to require analyses of expense data across several years to be inflation adjusted to a constant base year. *See* 30 CPUC 2d

*Footnote continued on next page*

Staff's analysis of Joint Applicants' 1994 HAI run concludes that the results are expressed in nominal 1994 dollars because the 1994 run employed use of 1994 ARMIS data. Several elements of Joint Applicants' run that were not 1994-specific were backed out. For instance, Joint Applicants' proposal makes use of expense figures derived from 1998 ARMIS data. Because staff did not accept these expense figures, this does not impact the conversion of the 1994 results into 2000 dollars. The 2000 HAI run used ARMIS data in nominal 2000 dollars.

To convert the 1994 run into real 2000 dollars and compare the 1994 and 2000 results in real terms, staff used the same 16% Consumer Price Index value that Joint Applicants used in their switching analysis. (Testimony of John Klick, 8/20/01, p. 11.)<sup>33</sup> This conversion is shown in Appendix B and yields a percent change in loop rates from 1994 to 2000 of 26.8%, resulting in an interim loop rate of \$8.56.

## **VI. Interim Rates for Unbundled Switching**

### **A. Joint Applicants' Proposal**

In their motion for interim relief, Joint Applicants request that the Commission adopt an interim UNE switching rate equivalent to one of the two alternative switching rates that SBC has proposed for its Illinois affiliate, SBC-Ameritech. Specifically, Joint Applicants propose that the Commission set interim rates equivalent to either of the options shown below.

---

576, 607, D.89-01-040 (1989) (containing standard list of documentation supporting a general rate case, see in particular item 6.F.).

<sup>33</sup> We verified this Consumer Price Index value based on information posted at the United States Department of Labor, Bureau of Labor Statistic's web site (<http://data.bls.gov/cgi-bin/cpicalc.pl>).

**Table 1**  
**Joint Applicant's Proposed Switching UNE Prices**

<b>Option # 1</b>	
Basic/Centrex Port	\$1.94
Local Switching Usage per Minute of Use	\$0.001087
ULS-ST Local Switching-ST (w/UNE-P)	\$0.001009
ULS-ST SS7 Signaling (w/UNE-P)	\$0.001076
ULS-ST Tandem Switching per Minute of Use	\$0.000215
<b>Option # 2</b>	
Basic/Centrex Port	\$3.16
Local Switching Usage per Minute of Use	\$0.000283
ULS-ST Local Switching-ST (w/UNE-P)	\$0.000205
ULS-ST SS7 Signaling (w/UNE-P)	\$0.000176
ULS-ST Tandem Switching per Minute of Use	\$0.000215

Joint Applicants base their request on the contention that current switching prices are based on outdated 1994 to 1996 data. According to Joint Applicants, Pacific's own publicly available data reveals that certain switching costs have decreased significantly since that time.<sup>34</sup> Further, Joint Applicants highlight two of Pacific's admissions to support an interim rate on par with

---

<sup>34</sup> Joint Applicants cite Pacific's testimony in the prior OANAD proceeding that the cost of new switches has been declining since 1993 at a rate of 8% per year. (D.99-11-050 at p. 172, fn. 152, as noted in Joint Applicants' Motion for Interim Relief, 8/20/01, p.7.) In addition, Joint Applicants explain that they ran HAI using SBC's publicly reported data

*Footnote continued on next page*



Illinois. First, Pacific admits it buys switches under an SBC-wide switching contract. (Kamstra Declaration, 4/20/01, para. 6.) Second, Pacific has stated that it can obtain switching prices that are as favorable as, or more favorable than those that its affiliates in Illinois and Michigan receive. (Joint Applicants' Reply Comments, 9/7/01, p. 5, citing Pacific's response to discovery request No. 118.) Given these statements by Pacific, Joint Applicants claim there is no basis for assuming that Pacific's forward-looking switching costs exceed the costs of SBC-Ameritech for Illinois.

Joint Applicants justify the application of an Illinois rate by comparing the average lines per switch for Pacific with SBC-Ameritech in Illinois. Joint Applicants contend that Illinois is the closest proxy to California for local switching operations in SBC's service territory. Based on 2000 ARMIS data, Pacific has the highest average number of lines per switch, with Illinois as the next highest average. (Murray Declaration, 9/7/01, p. 5.) Joint Applicants also note that Pacific's current switching prices are as much as 252% higher than the prices SBC-Ameritech has proposed for Illinois and 207% higher than the prices the Michigan Public Service Commission recently adopted for SBC's affiliate in that state. (Motion for Interim Relief, 8/20/01, p. 8.) Joint Applicants maintain that this difference in rates is unsupportable given the similarities in switch density of the two states, shown by average lines per switch, and the admissions of SBC-wide purchasing.

To further support their request, Joint Applicants contend that the switching costs calculated by HAI confirm that switching prices should be as low

---

for 1994 and 2000 for ARMIS expenses, ARMIS investment, and ARMIS demand data. (Klick Testimony, 8/20/01, p. 9.)

as, or lower than, the proposed Illinois rates. Joint Applicants state that using Pacific's own public information about costs in 2000, HAI produces a total local switching cost per line of \$2.82 per month. (Mercer Testimony, 8/20, p. 7; Mercer Declaration, 11/9/01, p. 3, footnote 10.) Based on this output of the HAI model, Joint Applicants maintain that either of the rate options proposed in Illinois would lead to conservative interim switching prices. In addition, the Joint Applicants contend that the FCC's Synthesis Model also produces forward-looking switching costs that support their interim relief request. (Klick Testimony, 8/20/01, p. 29-30.)

### **B. Amended Proposal**

In the September 28 ruling, the Assigned Commissioner and ALJ stated a concern that the proposed interim rates from Illinois differ dramatically in price structure from Pacific's current rates. The ruling required Joint Applicants to reformulate their request to entail a percentage reduction from current switching rates using the same rate structure as is currently in use for Pacific. In their amended filing, Joint Applicants reformulated the price structure as requested, but continue to recommend that the Commission adopt interim unbundled local switching and tandem rates no higher than SBC-Ameritech's proposed rates for Illinois.

Joint Applicants derived a method to take the results of their switching analysis and convert it Pacific's current rate structure. Their proposal provides Pacific with the same compensation for an average end-user for local switching that SBC would receive for service provided to an average Illinois end-user based on the proposed Illinois prices. This reformulated request entails a 69.4%

reduction from current local switching prices and a 79% reduction from current tandem switching rates.<sup>35</sup> Once again, the Joint Applicants rely on the output of the HAI model to support their request for an interim rate equivalent to the rates proposed by SBC-Ameritech in Illinois.

Joint Applicants maintain that this across the board 69.4% reduction for local switching may inadvertently result in a large true-up once final rates are adopted. Joint Applicants ask that the Commission consider minimizing the expected true-up by simplifying the current UNE switching rate structure for interim pricing. Joint Applicants provide two alternatives to the across the board 69.4% discount that they believe will result in a smaller true-up. The first alternative entails simplifying the distinctions between call types. Joint Applicants suggest that the Commission should remove the distinction between call types because Pacific itself has proposed this simplification when it proposed a discount for switching rates in the 271 proceeding. Specifically, Joint Applicants ask that, identical to Pacific's Section 271 proposal, the Commission eliminate the distinction in rates between intraoffice calls and originating interoffice calls.

Joint Applicants' second alternative switching price structure takes this simplification of call types and also removes any separate vertical feature charges. Again, this mimics Pacific's own proposal in the Section 271

---

<sup>35</sup> Joint Applicants calculate the 69.4% discount by first determining the total local switching revenue for an average per-line usage level based on the Illinois rate level. The result, \$3.54, is then divided by an estimate of average current revenue from UNE local switching prices in California (\$11.56). ( $\$3.54/\$11.56 = 30.6\%$ , or a 69.4% discount). They perform a similar analysis to determine the tandem switching discount of 79%. (Amended Proposal of Joint Applicants, 10/15/01, p. 3-4.)

proceeding. This would result in a discount of 63.2% for switching, and no charge for features. Joint Applicants contend that this second alternative proposal will likely lead to a smaller true up than the 69.4% across the board discount once final UNE switching rates are adopted.

### **C. Responses**

Pacific responds to this amended proposal by stating that Joint Applicants have not demonstrated that Pacific's switching costs have fallen by anything approximating 69.4% or that the prices SBC-Ameritech has proposed for Illinois are a reasonable surrogate for Pacific's switching costs. Pacific contends that Joint Applicants have failed to provide factual support for lower switch prices, more efficient switch maintenance practices or any new technology. Further, Pacific contends that Joint Applicants have made no showing that Illinois costs are relevant or determinative of Pacific's costs.

First, Pacific disputes any attempt by Joint Applicants to imply that the proposed price for unbundled switching in Illinois is sufficient to recover all of Pacific's switching costs. Pacific's witness Dr. Palmer explains that SBC-Ameritech disagrees with a number of aspects of the Illinois switching cost study and is appealing it. Further, Pacific contends that Joint Applicants have not established that California and Illinois have any similarity on a number of factors critical to switching prices including fill factors, cost of capital, cost of money, depreciation rates, labor rates, tax rates, and switch types. According to Pacific, the Joint Applicants' proposal to use Illinois prices is based solely on claims regarding switching investment and does not consider other factors that determine the UNE rate for unbundled switching.

Second, Pacific provides a comparison of the relative cost results of the FCC Synthesis Model for California and Illinois and uses this comparison to

dispute the Joint Applicants' proposal to use Illinois switching rates.<sup>36</sup> Based on its own run of the FCC's Synthesis Model, Pacific's contends that the Synthesis Model produces significantly higher end office usage and port costs for California than for Illinois and for other states where the incumbent local carrier has received approval under Section 271 to provide in-region long distance service.

Finally, Pacific notes that while Joint Applicants use a trend analysis using the HAI model to propose an interim loop rate, they do not use this same trend analysis to support an interim switching rate. According to Pacific, Joint Applicants performed the same trend analysis for switching costs and the results of that trend analysis do not justify the deep discount to Illinois rates that the Joint Applicants now propose. (Pacific Switching Comments, 10/30/01, p. 13.) According to Pacific, a trend analysis for switching suggests that local switching costs have fallen only 6% compared to the 69.4% reduction requested by Joint Applicants. (*Id.*)

#### **D. Discussion**

At the heart of the debate over an interim UNE switching rate is whether to compare California to Illinois. Pacific argues that Joint Applicants have not convincingly shown that critical cost factors that affect the UNE switching rate, such as labor rates and switch types, are the same across the two states. As we discussed in Section IV above, Pacific did not provide the cost

---

<sup>36</sup> According to Pacific, the FCC has never used the USF cost model to determine rates for a particular unbundled network element and the model was not designed to perform such a task. Pacific explains that it makes this comparison only because Joint Applicants and others have suggested using the USF Model. (Pacific Switching Comments, 10/30/01, p. 9, footnote 19.)

material requested by Joint Applicants regarding Illinois. This material might have supported Pacific's claim that costs in the two states are not comparable, but it might also have shown certain similarities in costs between the two states due to SBC-wide purchasing arrangements. As already discussed, because of Pacific's noncompliance with the ALJs' discovery rulings, we will deem the missing material to support the Joint Applicants' claim that switching rates in California should be lowered from current levels. Despite deeming this information to support interim rates, we will exercise our discretion so as not to adopt the full amount of interim rate discounts requested by the Joint Applicants. Rather, we will base interim rates on our review of the other issues raised in comments, and we will adjust Joint Applicants' proposed interim rates as set forth below.

This means that we do not agree to adopt the rates proposed in Illinois as interim UNE switching rates for California. While we will deem the missing cost data to support lower switching rates for California, we are not willing to presume that UNE switching rates for California and Illinois would be identical. We consider it plausible that certain differences in cost drivers exist between the two states, such as differences in tax rates or differences in regulatory cost modeling assumptions. Therefore, we will not adopt Joint Applicants' recommendation of applying proposed Illinois switching rates as interim rates for California.

We are left with the predicament wherein we have some indication that rates might be lower in California, but we cannot accept the Joint Applicants' proposed solution because it is not convincing for other reasons. Therefore, we must find another method for setting interim switching rates. Under the circumstances, we find it logical to apply the same methodology that we used to

set interim loop rates, namely a trend analysis using HAI. Joint Applicants actually performed a form of this trend analysis for switching and mention it briefly in their motion and supporting testimony. (Motion for Interim Relief, 8/20/01, p. 8-9; Klick Testimony, 8/20/01, p. 10-11.) While Joint Applicants have not proposed the results of that trend analysis for setting interim switching rates, we can use the data supplied by Joint Applicants to perform our own trend analysis.

Before turning to that trend analysis, we note that we are further persuaded to adopt interim switching rate based on public data showing substantial declines in per line and per minute of use switching costs since we last adopted UNE switching prices in D.99-11-050. Specifically, Joint Applicants analyzed ARMIS data that Pacific reported to the FCC for switch investments in California and found that:

- Pacific's booked switching investments per minutes of use declined 28% from 1994 to 1999. (Pitts Declaration, 4/20/01, p. 6.)
- Pacific's switch expenses per line dropped 23% from 1994 to 1999. (Murray Declaration, 4/20/01, p. 4.)
- Pacific's support investments for unbundled switching, including the cost of computers and related equipment, declined 15% from 1994 to 1999. (*Id.*, p. 7.)
- ARMIS data for 2000 shows a continued decline in switch investments and switch expenses per minute of use. (Klick Declaration, 11/9/01, para. 18-19.)

We find that this publicly reported data supports the establishment of interim UNE switching rates while the Commission continues its review of updated cost models in this proceeding.

Joint Applicants used some of the public information cited above as inputs to their HAI model. Specifically, Joint Applicants filed testimony by Mr. John Klick describing a comparison of HAI model runs for 1994 and 2000 in which he adjusted model inputs related to switch usage levels. Klick's analysis indicated decreases of 20% for port costs and 33% for usage costs. (Klick Testimony, 8/ 20/01, p. 10-11, footnote 11.) Upon more thorough review of Klick's analysis, we find that it does not consider any changes in switching investment costs, which are central to the debate over declines in overall UNE switching rates.

Joint Applicants filed another switching cost analysis using HAI for the year 2000 by Dr. Robert Mercer. Mercer's analysis included a large amount of adjustments to default inputs in the HAI model, including changes to aerial and buried drops, distribution and feeder cable, fixed switching investment, depreciation and net salvage values, taxes, and the investment in switching related to peak usage. (Mercer Testimony, 8/20/01, p. 28-33; Pitts Testimony, 8/20/01, p. 16.) When we look at the adjustments that Mercer used in his analysis for year 2000, we find that it is appropriate to limit his analysis to fixed and peak usage switching investment levels and tax rate changes and remove all of his other adjustments. Mercer's switching investment figures and tax rates are based on publicly available FCC and OANAD information. We disregard Mercer's other adjustments because they mainly impact loop costs.

After making these adjustments to Mercer's 2000 HAI model run, we can compare the results to Klick's 1994 HAI model and obtain a percentage change resulting from that comparison. After we convert Klick's 1994 model



results into 2000 dollars, the trend analysis indicates a decline in port costs from 1994 to 2000 of 22.5%, a decline in usage related costs of 24.6%,<sup>37</sup> and a decline in tandem switching rates of 13.8%.<sup>38</sup> (See Appendix C for a description of this switching analysis.) This trend analysis is essentially the same methodology that Joint Applicants used to arrive at an interim loop rate and we will use it here to adopt interim switching rates. The adopted interim rates are set forth in Appendix A.

With regard to pricing structure, Joint Applicants have actually provided three proposals involving interim switching rates, all with different price structures. In the September 28 ruling, the Assigned Commissioner and ALJ stated a preference to keep the pricing structure the same as current rates. In response, Joint Applicants explain that adhering to the current pricing structure could lead to a large true-up once final rates are set. They also note that Pacific itself has modified the pricing structure through its discount proposal in the Section 271 docket. Although Joint Applicants would prefer a simplified rate structure similar to Pacific's proposal in the Section 271 case, we have no basis on which to make interim changes to individual switching rate elements by a percentage different from the one we derived from the trend analysis. Therefore, the interim switching rates that we will adopt are based on a discount from current rates of 22.5% for the port, 24.6% for usage, and 13.8% for tandem switching, as shown in Appendix C.

---

<sup>37</sup> The percent change in usage related costs is calculated based on a comparison of the cost per line from 1994 to 2000.

<sup>38</sup> Our comparison of 1994 and 2000 HAI model runs showed no change in tandem switching rates over that time period. The 13.8% reduction results from converting the nominal HAI results into real dollars.

Joint Applicants have suggested that we consider an interim rate that eliminates charges for vertical features. Currently, each vertical feature involves a separate charge. Joint Applicants explain that the HAI model includes feature hardware in total switch investment, which is then assigned to port and usage price elements. (Pitts Testimony, 8/20/01, p. 18.) In other words, the HAI model does not derive separate vertical feature price elements. Further, Joint Applicants claim that if new rates are calculated with a single across-the-board percentage discount that includes separate vertical feature charges, this results in a higher percentage discount applying to port and usage rate elements than is true if feature charges are eliminated. Joint Applicants explain that this approach could lead to larger true-up payments once final rates are determined. (Joint Applicants' Amended Switching Proposal, 10/15/01, p. 8.) According to Joint Applicants, it is simpler to avoid feature penetration assumptions and eliminate the separate feature charges. (*Id.*) We note that Pacific itself proposed eliminating vertical feature charges when it proposed discounted switching rates in the Section 271 proceeding.

Joint Applicants are once again asking for a change in rate structure. In this case, we can distinguish this request because the HAI model is unable to calculate separate vertical feature costs. Instead, the model includes feature hardware costs in total switch investment. Because of this critical methodological difference, we are unsure what true-up effect might occur if we were to apply a straight percentage discount derived from the HAI model to the current vertical feature charges. Therefore, we will set vertical feature charges to zero for these interim switching rates because we think this will make any true-up to final rates much simpler. This elimination of vertical feature prices for interim rates does not prejudice whether final rates will involve separate vertical

feature charges. We will examine this issue in the next phase when setting final UNE switching rates.

Our decision to set an interim switching rate is further supported by the results of the FCC's Synthesis Model. Pacific claims that its run of the Synthesis Model does not support a switching rate discount. According to Pacific's analysis, the model indicates that California end office usage and port costs should be 23% and 19% *higher* than Illinois costs, respectively. (Pacific Bell Switching Comments, 10/30/01, p. 10.) Joint Applicants respond that Pacific has miscalculated and misconstrued the Synthesis Model results because Pacific's analysis fails to correct a substantial input error regarding usage volume. (Klick Declaration, 11/9/01, p. 5-6.) Moreover, Joint Applicants claim further flaws in Pacific's analysis from several factors including the fact that it relies on 1998 data rather than updated data for 2000. (*Id.*, p. 7.)

Based on analysis performed by our staff, we agree that Pacific's run of the Synthesis Model is flawed because Pacific did not re-run the model with correct usage volumes.<sup>39</sup> Rather, our staff corroborated the run of the Synthesis Model performed by Joint Applicants and its results do indeed show switching rates for California *lower* than those suggested by Pacific, and in line with the results described by Joint Applicants. (Klick Declaration, 11/9/01, p. 5-6.) The results also indicate less disparity in state switching rates between California and other states than Pacific has suggested. Hence, we can dismiss Pacific's contention that the Synthesis Model supports higher switching rates for

---

<sup>39</sup> According to a response to a data request from Commission staff, Pacific corrected the error noted by Joint Applicants and re-ran the Synthesis Model, obtaining similar results to Joint Applicants. (Pacific Bell Response to Data Request, 12/11/01.)

California because corrections to that analysis actually support a reduction in UNE switching rates from current levels.

Furthermore, Joint Applicants' own analysis using the Synthesis Model supports the results of our HAI switching trend analysis. As explained in their motion for interim relief, Joint Applicants' trend analysis using the Synthesis Model for 1994 and 2000 indicates a 12.6% decline in port costs and a 27.5% decline in usage costs.<sup>40</sup> (Klick Testimony, 8/20/01, p. 10.) When these results are converted into real dollar terms, the Synthesis Model trend analysis shows a 24.6% decline in port costs and a 37.5% decrease in usage costs. These results are within 2% of the percentage declines that resulted from our own trend analysis using HAI and thereby further support the interim switching rates we adopt today. (*See* Appendix D.)

We need not delve further into the other alleged flaws in Pacific's Synthesis Model analysis because we will not use the Synthesis Model to set the level of interim switching rates. As Pacific has noted, the FCC has specifically stated that it "has never used the USF cost model to determine rates for a particular element, nor was it [the USF model] designed to perform such a task. The model was designed to determine relative cost differences among different states, not actual costs."<sup>41</sup> We only note that the trend in cost declines shown by the Synthesis Model supports the rates we adopt today.

---

<sup>40</sup> For this analysis, usage costs are calculated and compared based on cost per "dialed equipment minute" (DEM) rather than on a cost per line basis.

<sup>41</sup> *See* Pacific Switching Comments, 10/30/01, p. 9, (quoting from *Memorandum Opinion and Order*, CC Docket No. 01-9, Application of Verizon New England Inc. to Provide in-Region, InterLATA Services in Massachusetts, released 4/16/01, para. 32).

Finally, as we have already stated, our use of HAI to perform a switching trend analysis does not mean that we endorse the use of the model to set final UNE switching rates for Pacific. Although we base interim rates on a trend analysis using HAI, we make no determination that HAI is the proper modeling choice to set final UNE rates for Pacific.

## **VII. True Up**

Joint Applicants request that any interim rates be subject to “true-down.” Essentially, they request that if final rates are lower than interim rates, Pacific should provide refunds to purchasers of these UNEs. However, if rates are ultimately higher than any interim rate, purchasers would not owe any additional payment for the interim period.

In the September 28 ruling, the Assigned Commissioner and ALJ rejected this notion of a “true down.” The ruling noted that if the Commission set interim rates that were not adjustable both up and down, and the interim rates were later found to be inaccurate, the Commission might potentially violate Section 252(d) of the Federal Telecommunications Act that requires cost-based rates for UNEs.

We affirm the earlier ruling in this proceeding that the rates adopted in this order should be adjusted, either up or down, once final rates are set. Therefore, we require Pacific to establish a balancing account to track the revenues received from these interim UNE rates for unbundled loops and unbundled switching. The balancing account should begin tracking revenues on the same date the interim rates become effective, which is the effective date of this order. Further, the balancing account should accrue interest at the three-month commercial paper rate, as is common practice for accounts of this type. When permanent UNE rates are adopted at the conclusion of this UNE reexamination proceeding, we will determine how to adjust loop and switching

rates, either up or down, from the date the interim rates became effective through the date of adoption of a final rate.

### **VIII. Categorization**

In Resolution ALJ 176-3059, dated March 15, 2001, the Commission preliminary categorized the consolidated applications in this proceeding as ratesetting. The Scoping Memo issued on June 14 affirmed this categorization and found that hearings might be required. Although no hearings have been held to date, hearings may be required in the next phase of this proceeding when we determine final UNE loop and switching rates.

### **IX. Comments on Draft Decision**

The Commission mailed the draft decision of the ALJ in this matter to the parties in accordance with Section 311(g)(1) and Rule 77.7 of the Rules of Practice and Procedure. Comments were filed by \_\_\_\_\_ and reply comments by \_\_\_\_\_.

### **Findings of Fact**

1. In D.99-11-050, the Commission established a process by which carriers with interconnection agreements with Pacific Bell could annually nominate up to two UNEs for consideration of their costs by the Commission.

2. In February 2001, the Commission received four requests to nominate UNEs for cost re-examination and a motion by Pacific to defer the cost re-examination proceeding.

3. On June 14, the Assigned Commissioner and ALJ issued a joint ruling denying Pacific's motion to defer any cost re-examination and finding sufficient justification to begin a reexamination of the costs of two UNEs, namely unbundled switching and unbundled loops.

4. On July 11, the Assigned Commissioner and ALJ issued a joint ruling identifying three criteria that Pacific's cost model filing must adhere to in order to be used for this cost re-examination proceeding.

5. Pacific's cost filings in this matter do not perform new runs of the SCIS model, the Cost Proxy Model, or other expense and support investment models.

6. Pacific's cost filings involve adjustments to the outputs of the prior OANAD models and it is not possible to provide the previously adopted models with new inputs.

7. On August 20, Joint Applicants filed a motion requesting interim UNE prices for unbundled loops and unbundled switching.

8. On September 28, the Assigned Commissioner and ALJ ruled that Pacific's August 15 cost filing did not meet the criteria set forth in the earlier ruling and that interim relief would be considered.

9. In *Turn v. CPUC*, the California Supreme Court held that the Commission could set interim rates as long as the rate is subject to refund and sufficiently justified.

10. Pacific and Joint Applicants agree that DLC equipment prices have fallen in recent years from the levels used in the prior OANAD cost proceeding.

11. Publicly available ARMIS data indicates declines in switching investment costs, growth in the number of access lines served, and growth in call volume.

12. Pacific purchases switches under an SBC-wide agreement and can obtain switches in California at prices that are as favorable as, or more favorable than the prices it pays for switches in Illinois.

13. Pacific's cost filing does not allow parties or staff to test the effects of switching investment changes, DLC equipment declines, line growth, or call volume changes.

14. Section 252(d) of the Telecommunications Act requires the Commission to set UNE rates based on cost.

15. On January 7, 2002, Joint Applicants and Pacific jointly requested the Commission take notice of a decision by the D.C. Circuit Court in *Sprint Communications Company v. FCC*.

16. On October 9, Pacific filed an Appeal to the Full Commission of the September 28 ruling and on October 19, Pacific filed a motion to vacate the September 28 ruling.

17. On August 13 and again on October 3, the assigned ALJ and the Law and Motion ALJ directed Pacific to produce material relevant to the issues in this proceeding.

18. On October 12, Pacific filed an appeal and stay request regarding the ALJs' discovery rulings, which has not been acted on by the Commission.

19. Pacific has not produced any of the documents it was ordered to produce in the August 13 and October 3 ALJ rulings.

20. Pacific produced documents and witnesses of SBC and SBC-Ameritech in the course of this proceeding.

21. The Commission does not generally entertain interlocutory appeals of ALJ rulings.

22. The Assigned Commissioner issued a ruling on February 21, 2002 imposing sanctions on Pacific for failure to comply with the ALJ's earlier discovery rulings.

23. Joint Applicants request a 36% discount from the current statewide-average loop rate of \$11.70 based on a trend analysis of 1994 and 2000 data input into the HAI model.



24. In their trend analysis for loops, Joint Applicants have attributed 24 lines to each DS-1 line and 672 lines to each DS-3 line because these lines carry 24 and 672 “voice grade equivalent” channels.

25. A DS-1 line consists of two copper loops and a DS-3 line is provisioned over fiber and does not involve any copper loops.

26. The prior OANAD cost models assumed that all remote terminals (RTs) were above ground.

27. Although Pacific asserts that underground CEVs are replacing RTs in many locations, the record is disputed on whether CEVs are more or less expensive than RTs on a per line basis.

28. The current record of this case does not support changing the original OANAD assumptions regarding RTs.

29. The HAI model uses expense to investment ratios to replicate forward-looking expense adjustments.

30. Joint Applicants request interim UNE switching rates equivalent to one of two alternative switching rates that SBC-Ameritech has proposed in Illinois.

31. In the September 28 ruling, the Assigned Commissioner and ALJ required Joint Applicants to reformulate their interim switching request to entail a percentage reduction from the current switching rate structure.

32. Joint Applicants filed an analysis of switching costs for 1994 and 2000 using the HAI model.

33. A trend analysis for switching using Klick’s 1994 HAI model run and Mercer’s 2000 HAI model run indicates a decline in port costs from 1994 to 2000 of 22.5% and a decline in usage-related costs over the same time period of 24.6%.

34. The HAI model does not calculate separate feature charges because it includes feature hardware in costs in total switch investment, which is then assigned to port and usage price elements.

35. Pacific's analysis based on its run of the FCC's Synthesis Model is flawed because Pacific did not re-run the model with correct usage volumes.

36. When the Synthesis Model is re-run with correct usage volumes, it shows switching rates for California *lower* than those suggested by Pacific, and it shows less disparity in state switching rates between California and other states than Pacific has suggested.

37. The Joint Applicants' Synthesis Model trend analysis indicates the same magnitude of cost declines in switching costs as shown in the trend analysis using the HAI model.

38. Joint Applicants requested interim UNE rates subject to "true down," meaning that if final rates are lower than interim rates, Pacific should provide refunds to UNE purchasers, but not vice versa.

### **Conclusions of Law**

1. The Commission retains the independent state authority to review UNE costs and prices and should move forward with its review of selected UNEs, namely unbundled loops and unbundled switching, rather than await the outcome of federal litigation.

2. Pacific's August 15 cost filing does not allow parties and Commission staff to 1) reasonably understand how costs are derived, 2) generally replicate Pacific's calculations, and 3) modify assumptions from the prior OANAD models.

3. Joint Applicants have presented a summary of evidence indicating a reasonable presumption of cost declines for unbundled loops and unbundled switching based on declining DLC equipment costs, SBC-wide switching

purchases, and ARMIS data indicating declines in switch investments and growth in access lines and call volume.

4. Without the ability to modify assumptions in Pacific's cost filing, it is not possible for parties and Commission staff to test the effects of declining input costs and volume and line growth.

5. Delays in this case may lead to prolonging current rates at non-cost-based levels.

6. The Commission has the authority to set interim rates for UNEs.

7. Interim rates are necessary due to delays in this proceeding caused by the inadequacies of Pacific's cost filing and the need to examine competing cost models.

8. Pacific is not harmed by the interim rate levels if rates are subject to adjustment once final rates are determined.

9. Criticism of the HAI model is irrelevant because we are not basing interim rates on the actual output of the HAI model but on a trend analysis of the change in loop and switching costs from 1994 to 2000.

10. The Commission may impose discovery sanctions where parties violate discovery procedures and rulings of the presiding officer.

11. The presiding officer must have the authority to rule on discovery motions and impose sanctions for discovery abuse to ensure all material evidence is disclosed without undue delay.

12. Pacific has waived any argument it does not have access to and/or control of documents of its affiliates and parent company by producing documents and witnesses of SBC and SBC-Ameritech in this proceeding.

13. We should deny Pacific's appeal of the September 28 ruling and its October 12 appeal of the ALJs' discovery rulings.

14. We should affirm the ALJ rulings requiring Pacific to produce out of state cost information and the Assigned Commissioner ruling of February 21, 2002 imposing an issue sanction against Pacific for its noncompliance with discovery rulings. The material that Pacific has refused to produce should be deemed to support the adoption of interim rates for unbundled loops and unbundled switching that are lower than current rates.

15. We should deny Pacific's motion to vacate the September 28 ruling because we should not amend the schedule of the UNE Reexamination based on a conditional proposal that is currently pending in another docket.

16. We should account for growth in DS-1 and DS-3 lines on a physical pair basis rather than through the use of voice grade equivalents. DS-1 lines should be counted as two access lines and DS-3 lines as one access line for purposes of setting an interim loop rate.

17. We should dismiss Pacific's comments regarding the cost of plant extension growth because a forward-looking cost model should consider the cost to serve total demand, not merely an extension of it.

18. If assumptions regarding RTs and other DLC non-equipment costs are held constant in the HAI trend analysis, these factors will not impact the results of the trend analysis.

19. It is not reasonable to assume that price decreases for certain technologies automatically lead to lower expenses.

20. The investment/expense factors in HAI should be removed for purposes of our trend analysis.

21. Certain differences in cost drivers between California and Illinois may lead to different UNE switching rates in the two states.

22. It is reasonable to apply the same trend analysis using the HAI model that was used to set interim UNE loop rates to set interim UNE switching rates.

23. Publicly reported data, including data showing declines in switching investments and switch expenses, supports the establishment of interim UNE switching rates.

24. It is reasonable to compare Dr. Mercer's HAI model run for 2000 with the results of Klick's 1994 HAI model run.

25. It is not reasonable to deviate from a 24.6% decline in switch usage rates identified by the HAI trend analysis to adopt different discount percentages for individual switching rate elements.

26. For the purposes of interim switching rates, we should eliminate vertical feature charges because the HAI model includes feature charges in switching investment.

27. Pacific's contention that the Synthesis Model supports higher switching rates for California should be rejected due to flaws in Pacific's run of the Synthesis Model.

28. The Joint Applicants' analysis of the FCC's Synthesis Model supports a reduction in UNE switching rates from current levels.

29. Once final rates are adopted, these Interim rates should be adjusted, either up or down, from the effective date of this order.

30. We should affirm the Assigned Commissioner and ALJ ruling of June 14, 2001, which (1) denied review of the costs of the DS-3 entrance facility without equipment, (2) denied review of the EISCC, and (3) denied Pacific's motion to defer this proceeding.

**O R D E R****IT IS ORDERED** that:

1. The motion for interim relief, filed on August 20, 2001 by AT&T Communications of California, Inc. and WorldCom, Inc., is granted in part as set forth herein.

2. The monthly recurring prices for loop and switching unbundled network elements (UNEs) offered by Pacific Bell Telephone Company (Pacific) that are set forth in Appendix A to this decision satisfy the requirements of Sections 251(c)(2), 251(c)(3), and 252(d)(1) of the Telecommunications Act of 1996 and are hereby adopted on an interim basis.

3. Pursuant to Commission Resolution ALJ-181 (adopted October 5, 2000), Pacific shall prepare amendments to all interconnection agreements between itself and other carriers. Such amendments shall substitute the interim monthly recurring UNE prices for loops and switching set forth in Appendix A, for the UNE prices set forth in such interconnection agreements. Such amendments shall be filed with the Commission's Telecommunications Division, pursuant to the advice letter process set forth in Rules 6.1 and 6.2 of Resolution ALJ-181, within 30 days after the effective date of this order. Unless protested, such amendments shall become effective 5 days after filing.

4. The interim UNE prices for loops and switching adopted in this order shall be effective on the date this order is effective. Pacific shall make all billing adjustments necessary to ensure that this effective date is accurately reflected in bills applicable to these UNEs.

5. Within 10 days of the effective date of this order, Pacific shall file an advice letter to establish a balancing account to track the revenues received from these interim UNE rates, beginning on the same date the interim rates become

effective. The balancing account should accrue interest at the three-month commercial paper rate. Unless protested, the advice letter shall become effective 5 days after filing.

6. Application 01-02-034, filed by The Telephone Connection Local Services LLC, is dismissed.

7. The Assigned Commissioner's and Administrative Law Judge's ruling dated June 14, 2001, which denies Pacific's February 28, 2001 Motion to Abey, is affirmed.

8. Pacific's October 9 appeal of the September 28 ruling is denied.

9. Pacific's October 19 motion to vacate the September 28 ruling is denied.

10. Pacific's October 12 appeal of the ALJs' discovery rulings is denied.

11. Pacific's October 31 Motion for Official Notice and its November 20 motion to strike the response of Joint Applicants to its October 31 motion are denied as moot.

12. We take official notice of the December 28, 2001 decision by the D.C. Circuit Court in *Sprint Communications Company v. FCC*.

13. The Assigned Commissioner's ruling in this proceeding dated February 21, 2002, which imposes discovery sanctions on Pacific, is affirmed.

This order is effective today.

Dated \_\_\_\_\_, at San Francisco, California.



## **APPENDIX A**

## Appendix A

*Interim Rates*

	<i>Current</i>	<i>Discount %</i>	<i>Adopted Interim</i>
<b>Loop (Basic 2-wire)</b>	\$ 11.70	26.84%	\$ 8.56
<b>Switch</b>			
<b>Port (2-wire)</b>	\$ 2.88	22.51%	\$ 2.23
<b>Usage</b>			
<b>Interoffice originating</b>			
setup per attempt	\$ 0.005940	24.63%	\$ 0.004477
holding time per MOU	\$ 0.001840	24.63%	\$ 0.001387
<b>Interoffice termination</b>			
setup per attempt	\$ 0.007000	24.63%	\$ 0.005276
holding time per MOU	\$ 0.001870	24.63%	\$ 0.001409
<b>Intraoffice</b>			
setup per attempt	\$ 0.013990	24.63%	\$ 0.010544
holding time per MOU	\$ 0.003620	24.63%	\$ 0.002728
<b>Vertical Features</b>			
<b>Tandem Switching</b>			
setup per attempt	\$ 0.000750	13.79%	\$ 0.000647
setup per completed msg	\$ 0.001130	13.79%	\$ 0.000974
holding time per MOU	\$ 0.000670	13.79%	\$ 0.000578
<b>UNE-Platform</b>			
<b>@ 1400 Local Voice &amp; 300 Toll Minutes</b>	\$ 23.18	27.87%	\$ 16.72
<b>@ 2000 Local Voice Minutes</b>	\$ 22.94	28.29%	\$ 16.45

## **APPENDIX B**

## Appendix B

**Analysis of Interim Unbundled Loop Rates**

						<i>Nominal</i>		<i>Discount</i>						
						<i>Loop 1994</i>	<i>Loop 2000</i>	<i>reduction</i>	<i>% decrease</i>	<i>from current</i>	<i>New Price</i>			
<b><i>Joint Applicants' Analysis</i></b>														
DLC Costs						\$	1.51		12.03%	\$	1.41	\$	10.29	
VGEs + Expenses						\$	3.94		31.39%	\$	3.67	\$	8.03	
<b>Final Proposal</b>						\$	12.55	\$	8.06	\$	4.19	\$	<b>7.51</b>	
<b>After conversion to real dollars</b>						\$	14.56	\$	8.06	\$	5.22	\$	<b>6.48</b>	
<b><i>Pacific's analysis of JA's proposal</i></b>														
DLC Costs									8.29%	\$	0.97	\$	10.73	
VGEs									14.27%	\$	1.67	\$	10.03	
Expenses									15.81%	\$	1.85	\$	9.85	
VGEs + Expenses									30.09%	\$	3.52	\$	8.18	
<b>Final</b>									38.38%	\$	4.49	\$	<b>7.21</b>	
<b><i>Staff's analysis</i></b>														
Removing VGEs						\$	13.44	\$	10.03	\$	2.97	\$	8.73	<sup>1</sup>
Removing Expenses						\$	13.44	\$	9.93	\$	3.06	\$	8.64	<sup>2</sup>
<b>Removing VGEs + Expenses</b>						\$	13.44	\$	11.41	\$	1.77	\$	<b>9.93</b>	<sup>3</sup>
<b>After conversion to real dollars</b>						\$	15.59	\$	11.41	\$	3.14	\$	<b>8.56</b>	<sup>4</sup>

<sup>1</sup> Line count reduction factors 1994: 24.2% 2000: 6.84%; Expense and DLC savings kept constant.

<sup>2</sup> Before removing VGEs (VGE and DLC savings kept constant).

<sup>3</sup> After removing VGEs *and* Expenses (DLC savings kept constant).

<sup>4</sup> Using a 16% CPI adjustment factor

## **APPENDIX C**

## Appendix C

*Analysis of Interim Unbundled Switching Rates*

Switching rate adjustment with <b>no</b> vertical feature rate elements	<i>Current Switch rate</i>	<i>HAI 1994 Run (1994 \$s)<sup>1</sup></i>	<i>HAI 1994 Run (2000 \$s)<sup>1</sup></i>	<i>HAI 2000 Run (2000 \$s)<sup>2</sup></i>	<i>% of change from 1994 to 2000 (2000 \$s)</i>	<i>Interim Rate</i>
<b>Port Usage</b>	\$ 2.88	\$ 1.88	\$ 2.18	\$ 1.69	22.5%	\$ 2.23
<b>Cost per Line</b>		\$ 3.14	\$ 3.64	\$ 2.74	24.6%	
<b>Interoffice originating</b>						
setup per attempt	\$ 0.005940	\$ 0.001937	\$ 0.002247	\$ 0.001694	24.6%	\$ 0.004477
holding time per MOU	\$ 0.001840	\$ 0.000600	\$ 0.000696	\$ 0.000525	24.6%	\$ 0.001387
<b>Interoffice termination</b>						
setup per attempt	\$ 0.007000	\$ 0.001937	\$ 0.002247	\$ 0.001694	24.6%	\$ 0.005276
holding time per MOU	\$ 0.001870	\$ 0.000600	\$ 0.000696	\$ 0.000525	24.6%	\$ 0.001409
<b>Intraoffice</b>						
setup per attempt	\$ 0.013990	\$ 0.001937	\$ 0.002247	\$ 0.001694	24.6%	\$ 0.010544
holding time per MOU	\$ 0.003620	\$ 0.000600	\$ 0.000696	\$ 0.000525	24.6%	\$ 0.002728
<b>Tandem Switching</b>						
setup per attempt	\$ 0.000750	\$ 0.000155	\$ 0.000180	\$ 0.000155	13.8%	\$ 0.000647
setup per completed msg	\$ 0.001130	\$ 0.000234	\$ 0.000271	\$ 0.000234	13.8%	\$ 0.000974
holding time per MOU	\$ 0.000670	\$ 0.000139	\$ 0.000161	\$ 0.000139	13.8%	\$ 0.000578

<sup>1</sup> Testimony of John C. Klick, August 20<sup>th</sup> 2001.

<sup>2</sup> Testimony of Robert A. Mercer, August 20<sup>th</sup> 2001.

## **APPENDIX D**

## Appendix D

### *Comparison of HAI and FCC Synthesis Model Runs*

<b>FCC Synthesis Model Trend Analysis of Switching Costs<sup>1</sup></b>	<b>Current Switch rate</b>	<b>1994 Synthesis Model Run (1994 \$s)</b>	<b>1994 Synthesis Model Run (2000 \$s)</b>		<b>2000 Synthesis Model Run (2000 \$s)</b>	<b>% of change from 1994 to 2000</b>		<b>Resulting Rate</b>
<b>Port</b>	\$ 2.88	\$ 1.35	\$ 1.57		\$ 1.18	24.6%		\$ 2.17
<b>Cost per DEM<sup>2</sup></b>		\$0.002083	\$0.002416		\$0.001511	37.5%		

<b>HAI Model Trend Analysis of Switching Costs<sup>3</sup></b>	<b>Current Switch rate</b>	<b>1994 HAI Model Run (1994 \$s)</b>	<b>1994 HAI Model Run (2000 \$s)</b>		<b>2000 HAI Model Run (2000 \$s)</b>	<b>% of change from 1994 to 2000</b>		<b>Resulting Rate</b>
<b>Port</b>	\$ 2.88	\$ 1.88	\$ 2.18		\$ 1.69	22.5%		\$ 2.23
<b>Cost per DEM<sup>2</sup></b>		\$0.000839	\$0.000973		\$0.000587	39.7%		

<sup>1</sup> Testimony of John C Klick, August 20, 2001: p.10.

<sup>2</sup> Dial Equipment Minutes (DEM).

<sup>3</sup> Staff's analysis using Klick's 1994 and Mercer's modified 2000 run.